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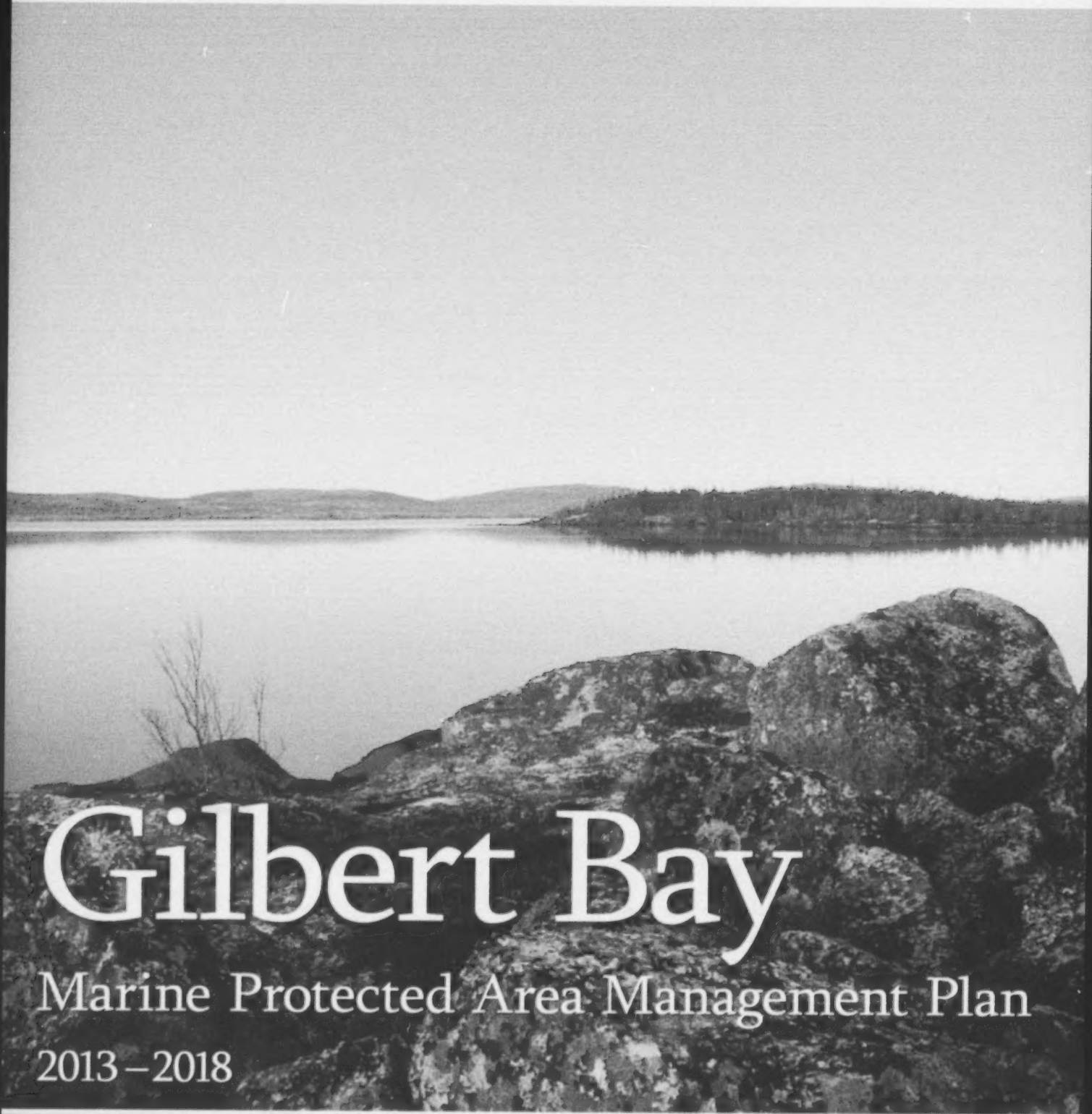

Gilbert Bay

Marine Protected Area Management Plan

2013 – 2018

Canada

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Foreword

Gilbert Bay was designated as a Marine Protected Area (MPA) under the *Oceans Act* on October 11th, 2005, to conserve and protect a genetically distinct population of Atlantic Cod (*Gadus morhua*) which carries out most of its life cycle within the boundaries of the Bay. This accomplishment was the result of hard work by the Gilbert Bay Steering Committee and commitment of the communities of Port Hope Simpson and William's Harbour to protect a unique marine resource in their area. In 2007, the Gilbert Bay Steering Committee, with direction from Fisheries and Oceans Canada (DFO), developed its first Management Plan. In moving from a planning phase to management, the Committee was renamed the Gilbert Bay Advisory Committee (GBAC).

GOLDEN COD
GILBERT BAY, NEWFOUNDLAND & LABRADOR

The GBAC continues to provide advice to DFO regarding the management of the MPA, assists in science and enforcement monitoring within the MPA, and takes a lead role in many of the management actions associated with the non-regulatory objectives, such as coordinating education and awareness programs and the Golden Cod Festival. Members of the GBAC also explore ways in which the MPA can assist in environmentally sustainable economic development within their region, and seek funding opportunities and partnerships to support MPA projects. Overall, the MPA continues to influence the way that natural resources are looked at within the region surrounding Gilbert Bay and promotes their protection and sustainable use.

The original Management Plan served as a guide to facilitate informed decisions with respect to the management of the Gilbert Bay ecosystem over a 3 year period, ending in 2010. It was developed in collaboration with local stakeholders using scientific data and background information, and was intended to serve as a "living" document which would be updated on a regular basis as part of performance monitoring. Fisheries and Oceans Canada (DFO) has developed an updated Management Plan to guide the MPA from 2013 – 2018. The changes are based on the results of the monitoring programs, science advice, and input from the GBAC and interested public. The Advisory Committee is satisfied that the aims and objectives of the Gilbert Bay Marine Protected Area will be well served by this plan and fully endorse it.

Margaret Burden

Margaret Burden
Co-chair, Gilbert Bay MPA Advisory Committee
Mayor, Port Hope Simpson
(Original signed by M. Burden)

February 7th 2013

Date

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List of Acronyms

AOI	Area of Interest
CO	Conservation Objective
C&P	Conservation and Protection (Branch of DFO)
CPUE	Catch per Unit Effort
CSAS	Canadian Science Advisory Secretariat
DFO	Fisheries and Oceans Canada
EC	Environment Canada
FM	Fisheries Management (Branch of DFO)
GB	Gilbert Bay
GBAC	Gilbert Bay Advisory Committee
LSCAP	Labrador Southeast Coastal Action Program
MPA	Marine Protected Area
MUN	Memorial University of Newfoundland
NCC	NunatuKavut Community Council
RAP	Regional Advisory Process
SADC	South-eastern Aurora Development Association
SLA	Service Level Agreement
TC	Transport Canada

Abstract

The Gilbert Bay Marine Protected Area (MPA) was established in 2005 at the request of local stakeholders, to protect the unique population of cod in Gilbert Bay. The community-based Steering Committee (now called Advisory Committee) developed a three-year management plan in 2007, which is now up for renewal. The 2013 – 2018 Gilbert Bay MPA Management Plan spans five years and incorporates the advice of the Gilbert Bay Advisory Committee, the results of the monitoring programs, input from public consultations, and advice from Science and Fisheries Management Branches of DFO. The revised plan identifies the important issues for the future management of the MPA. In 2009 a Science Advisory Report was completed to review the Gilbert Bay Marine Protected Area monitoring indicators, protocols and strategies, and an assessment of the Gilbert Bay cod population. Results concluded that the five indicators currently being used to monitor the Gilbert Bay cod population, and their respective sampling and analytical protocols, are appropriate and sufficient to monitor the MPA against its Conservation Objective(s). The Science report, in addition to results of the annual monitoring program of the Gilbert Bay cod population, indicate a decline in abundance. Fishing activities, in areas outside the MPA boundaries, remains the greatest potential threat to Gilbert Bay cod. This threat to the population increases as fishing effort and associated mortality increases in areas outside the MPA boundaries.

To address the declining cod population, changes to the Management Plan include a delayed season opening for cod outside the MPA (early September), an expanded science monitoring program with new genetic work, and tagging studies outside the MPA. Other changes reflected in the Management Plan include the evolution from a steering committee to an advisory committee, holding an annual general meeting instead of several Committee meetings per year, and the discontinuation of an MPA community coordinator position. The success of the MPA continues to be closely tied to the level of local support and community involvement in the MPA including research, monitoring, educational programs and the Golden Cod Festival.

DFO

1.0 INTRODUCTION

Gilbert Bay was designated as a MPA on 11 October, 2005, at the request of local stakeholders to protect a unique population of Atlantic cod. This designation provided the long term regulatory mechanism to conserve and protect a distinct resident cod population in Gilbert Bay known as the "golden cod".

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The community-based Advisory Committee continues to be actively involved in monitoring and the evolution of management strategies designed to ensure that the goals and objectives of the MPA are met. The Management Plan was developed in 2007 with the expectation that it would be necessary to update and re-evaluate some components of the plan on a regular basis. The science monitoring program, which is a key component of the Management Plan, was reviewed on October 22, 2009 through the DFO Science Regional Advisory Process (RAP).

The 2013 – 2018 Gilbert Bay MPA Management Plan spans five years and incorporates the advice of the Gilbert Bay Advisory Committee, the results of the monitoring programs, input from public consultations, and advice from Science and Fisheries Management Branches of DFO. Readers are encouraged to provide feedback on any aspect of the plan and can do so using the following contact information:

Oceans Division
Ecosystems Management Branch
Fisheries and Oceans Canada
P.O. Box 5667
St. John's, NL A1C 5X1
MPANL@dfo-mpo.gc.ca

1.1 Governance Structure and Vision Statement

With the passing of the *Oceans Act*, DFO has the lead responsibility for oceans management in Canada, including establishing and managing MPAs. Although DFO retains the legislative responsibility to ensure that MPAs are managed appropriately, the interests of all users are considered in accordance with the provisions of the *Oceans Act*. Based on this responsibility, DFO initiated a focused, cooperative, and ecosystem based management approach involving all levels of government, affected Aboriginal organizations, coastal communities, and non-government stakeholders. Under this strategic partnership, management strategies and actions are identified to help ensure that MPA conservation objectives are achieved. The regulatory conservation objectives are the responsibility of DFO, while the non-regulatory conservation objectives are pursued by community partnerships initiated by the Advisory Committee with support from DFO as appropriate.

The Advisory Committee

The Gilbert Bay Steering Committee was established in 2001 and renamed the Gilbert Bay Advisory Committee (GBAC) as the MPA progressed from the planning phase to the management phase. The Committee's commitment to stewardship and cooperation in the protection of the MPA laid the groundwork for the regulations and on-going management initiatives. The Committee provides an excellent forum for issue identification, discussion, and resolution and is co-chaired by representatives of the communities of Port Hope Simpson and William's Harbour. Other voting members include representatives of the NunatuKavut Community Council (NCC) (formerly the Labrador Métis Nation), the Southeastern Aurora Development Association (SADC), local fish harvesters, and residents. Non-voting members include government representatives, and researchers. The role of the committee is to:

- represent key constituent groups or stakeholders;
- provide advice to DFO and other regulators regarding the management of the MPA; and
- promote awareness and community involvement in the Gilbert Bay MPA.

The vision statement developed by the Committee reflects the overall goal of the MPA and the plan:

GBAC Vision: ***To sustainably manage the marine ecosystem, habitats, and species of Gilbert Bay as a community united by its people, culture, and mutual desire to share with future generations.***

The mandate of the Committee is stated in the Terms of Reference as follows:

- Participate and assist in the implementation of the Gilbert Bay Management Plan and to provide advice to DFO on the management of the Gilbert Bay MPA with respect to monitoring, enforcement, consultations, etc.
- Promote the conservation, protection, and sustainable use of Gilbert Bay's marine resources and their habitats.
- Promote scientific and fisheries research opportunities in the Gilbert Bay MPA.
- Promote public awareness, education, and support of the Gilbert Bay MPA.
- Promote environmentally sustainable economic development of Gilbert Bay's natural resources through development in such areas as eco-tourism.
- Foster partnerships with other similar interest/stakeholder groups.
- Identify sources of funding for continuing research, monitoring, education, and public awareness.

Committee members continue to be involved with the management of the Gilbert Bay MPA as an advisory body and by aiding with data collection, enforcement monitoring, public awareness programs such as the Golden Cod Festival, and any other project or activity that enables the Gilbert Bay MPA to reach its conservation objectives. Committee members also explore ways in which the MPA can assist in environmentally sustainable economic development within their region, and seek funding opportunities and partnerships to support MPA projects. The Advisory Committee will convene annually to discuss science, enforcement, and emerging issues to allow members of the general public to bring forth concerns and to keep all stakeholders updated.

1.2 Management Framework

The Management Plan guides DFO, the Advisory Committee, and other stakeholders in managing the various activities within the MPA. The plan identifies the management actions necessary to ensure the objectives of the Gilbert Bay MPA are being met. The management framework for the Gilbert Bay MPA includes:

- a zoning approach;
- interpretation of the zoning scheme within the MPA boundaries;
- a description of the regulatory and non-regulatory conservation objectives;
- the regulations that apply within the MPA;
- a description of permitted activities within the boundaries;
- a description of management strategies and actions developed to ensure the objectives are met; and
- performance monitoring.

As an operational tool, the Management Plan is not intended to be prescriptive, rather it establishes management standards to assist all stakeholders in meeting the MPA objectives. Figure 1 describes, in broad terms, the management framework for the Gilbert Bay MPA.

The collective expertise, knowledge and mandates of DFO, other federal and provincial government departments and agencies, and the Advisory Committee provide the basis for a governance structure responsible for management of the MPA. The Management Plan sets priorities and actions, as well as specific targets or values in order to measure the progress of the MPA toward its objectives.

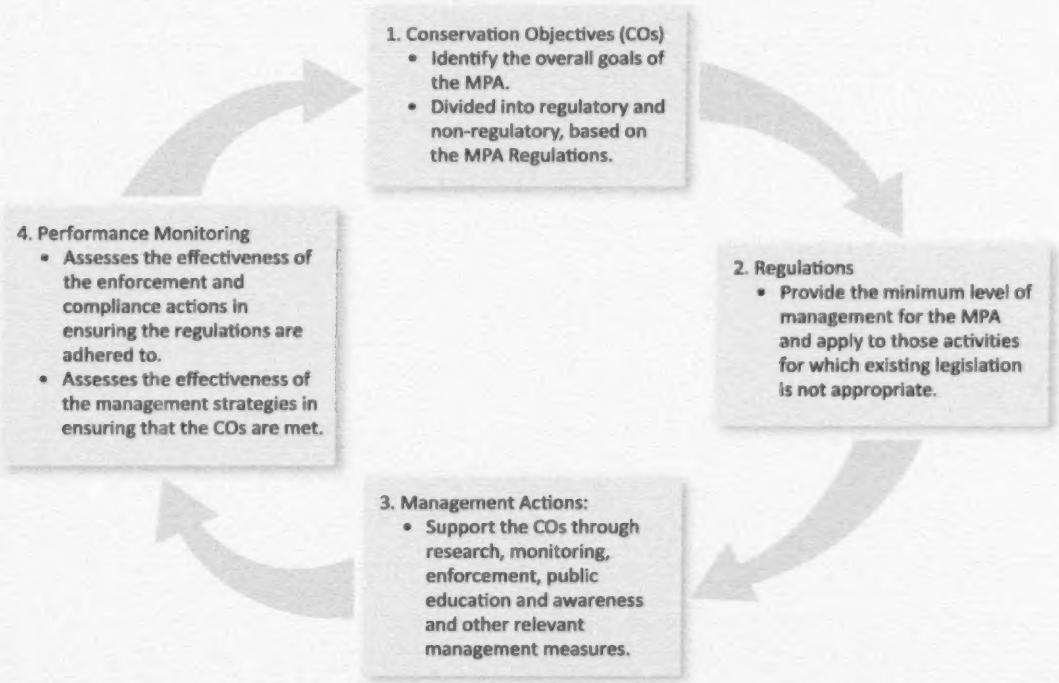
1. Conservation Objectives (COs)
• Identify the overall goals of the MPA.
• Divided into regulatory and non-regulatory, based on the MPA Regulations.
2. Regulations
• Provide the minimum level of management for the MPA and apply to those activities for which existing legislation is not appropriate.
3. Management Actions:
• Support the COs through research, monitoring, enforcement, public education and awareness and other relevant management measures.
4. Performance Monitoring
• Assesses the effectiveness of the enforcement and compliance actions in ensuring the regulations are adhered to.
• Assesses the effectiveness of the management strategies in ensuring that the COs are met.

Figure 1. Management framework for the Gilbert Bay Marine Protected Area.

2.0 BACKGROUND

2.1 Gilbert Bay MPA

Gilbert Bay is a narrow inlet located on the southeast coast of Labrador (52º34.9'N 56º01.25'W), approximately 300 km from Happy Valley – Goose Bay (Figure 2). The bay has two narrow openings to the Labrador Sea near the community of William's Harbour. The Gilbert Bay MPA is approximately 60 km^2. Several biophysical conditions exist in concert within the bay, including a relatively short ice-free season, highly stratified temperature and salinity gradients, the presence of shallow sills rising to depths of 5m separating portions of the bay, and a number of restricted arms. These and other biophysical features most likely play an important role in the life history of Atlantic cod in Gilbert Bay and, by retaining eggs and larvae, may in fact enable this local population to exist.

The waters of Gilbert Bay also support a wide range of marine species, including shellfish (e.g. Icelandic Scallop, Rock Crab), demersal fish (e.g. Atlantic Cod, Winter Flounder, Staghorn Sculpin), pelagic fish (e.g. herring, capelin), and anadromous fish (e.g. Atlantic Salmon, Arctic Char) as well as aquatic plants (e.g. winged kelp, eelgrass) (Kryger, 2004). There are a number of coralline algae beds present within Gilbert Bay (Copeland *et al.*, 2007) which are sensitive habitats supporting a wide variety of marine organisms and plants. The area is also frequented by several species of marine mammals, including minke whales, harbour porpoise, killer whales, and harp seals, and is inhabited seasonally by several species of waterfowl, including common loons, Canada geese, and common mergansers.

Despite the number and diversity of stakeholders with an interest in the Gilbert Bay MPA there are few permanent residents living adjacent to Gilbert Bay itself. The population of the southeast region of Labrador is approximately 2,700 with a significant portion of this population being aboriginal people of Inuit and European descent formerly known as the Métis (Murphy *et al.*, 2002). The key communities near Gilbert Bay are Port Hope Simpson and William's Harbour, where the majority of stakeholders reside. Located approximately 20 km from Gilbert Bay, Port Hope Simpson has a resident population of approximately 500 (Pers. Comm., M. Parr-Penney 2010). William's Harbour is located on the south side of Granby Island at the mouth of Gilbert Bay, approximately 35 km east of Port Hope Simpson and has a current population of approximately 17 (Pers. Comm., M. Parr-Penney 2011). Fishing remains the primary source of employment for people in both communities (Murphy *et al.*, 2002).

Historically, communities in this region were isolated from each other, but today the area is serviced by telephone, diesel operated power generators, a passenger and a freight ferry, as well as a commercial airline. The Trans-Labrador Highway connects the community of Port Hope Simpson to other communities on the Labrador Straits, north shore of Quebec,central and western Labrador including Happy Valley-Goose Bay, Churchill Falls and Labrador City/Wabush. More information is available in the socioeconomic (Murphy *et al.*, 2002) and the biophysical (Morris *et al.*, 2002a) overviews of Gilbert Bay.

2.2 Origins of the MPA

Historically, the Atlantic Cod fishery was the most important commercial activity in Newfoundland and Labrador. However, in the late 1990s the northern cod stocks were at an extremely low level despite fishery closures and catch reductions since the early 1990's. Gilbert Bay had been identified as having one of the few coastal concentrations of northern cod in the Newfoundland and Labrador region. Local people knew the cod population found in Gilbert Bay was visually different and distinct from cod found elsewhere and they were concerned about a decline in the population. Representatives from Port Hope Simpson and William's Harbour expressed their desire to protect the Gilbert Bay cod.

Memorial University of Newfoundland (MUN) scientists working with fish harvesters identified Gilbert Bay cod as a resident population, genetically distinct from other Atlantic Cod populations (Green & Wroblewski 2000; Ruzzante *et al.*, 2000; Wroblewski, 2000). In 1998, DFO began the first of several consultations to determine the suitability of Gilbert Bay as a candidate MPA under Canada's *Oceans Act*. Biophysical and socioeconomic overviews of the area were carried out as part of the Area of Interest (AOI) evaluation process and revealed secondary benefits that could be achieved through MPA designation. Pursuant to Section 35 of the *Oceans Act*, Gilbert Bay was designated as an MPA in order to conserve and protect the cod population as well as provide indirect protection to other species and their habitats. The physical characteristics of Gilbert Bay likely play a very important role in the establishment and continued support of the local cod population found there. Within Gilbert Bay, specific areas have been identified as important spawning areas and nursery habitats and as such, these areas are afforded the highest level of protection.

2.3 The MPA Regulations

Section 35(3) of the *Oceans Act* provides for the development of regulations that allow MPAs to be designated, zoned, and activities or classes of activities to be prohibited. Steps in the development of the regulations and designation of the MPA are outlined in the *National Framework for Establishing and Managing Oceans Act Marine Protected Areas* (in prep.).

The regulations for Gilbert Bay were the outcome of a consensus-based process involving the public, stakeholder groups, and other partners. This was achieved through a series of consultations conducted over a three year period which resulted in the designation of zones, boundaries, and prohibited activities which afford a high level of protection to Gilbert Bay cod and their habitats. Various activities, including many types of fishing, are allowed through exceptions to the general prohibitions. In some circumstances the regulations will allow certain activities even though they may cause some disturbance (i.e. activities which are required for public safety and security). Research, monitoring, and educational activities are managed through the submission of activity plans to DFO for approval. The application for approval for scientific or educational activities is attached in Appendix A. The regulations are listed in Appendix B and provide more information on the criteria for activity plan review and approval.

The MPA regulations have the capability of providing long term protection that is geared specifically towards the conservation and protection of the Gilbert Bay cod. They can be used in conjunction with other federal and provincial legislation which may be more useful in providing additional short term protection to the cod and its habitat. A *Fisheries Act* Variation Order is currently employed to provide a temporary prohibition on recreational cod fishing in Zone 3 (Table 3).

2.4 The Management Boundaries

The Gilbert Bay MPA boundaries are based on information collected on the areal extent of Gilbert Bay cod movement (Morris *et al*, 2003). They include from the low water mark, the waters of Gilbert Bay contained within lines drawn across the three entrances of the bay at Winnard Tickle, Williams Harbour Run and Main Tickle (Figure 2). Long term monitoring results have now shown that large (commercial size) Gilbert Bay cod move out of the MPA during the summer to feed, ranging as far as Salmon Point to the north and Spear Point to the south, but return to the MPA in the fall to overwinter and spawn.

Within these boundaries, the MPA is divided into three management zones based on differences in the physical environments and habitats and their sensitivity to human activities.

Zone 1 (28.7 km²): Two shallow areas in the upper reaches of the bay have been identified as sensitive due to their important spawning, rearing, feeding, and juvenile habitat for Gilbert Bay cod. These areas also have the highest concentrations of cod found within Gilbert Bay. Cod migrate to and from these areas on an annual basis. Due to the importance of these areas in the life cycle of the cod, they are given the highest level of protection. This zone is also important for migrating salmon, char, and trout, and has a number of capelin beaches and pristine maerl beds.

Zone 2 (11.9 km²): This zone is identified as the main arm of the bay, or the connecting body of water between Zones 1A and B and Zone 3. A smaller but important component of the cod population uses this zone for spawning, feeding and migrating between the outer part of the bay in the summer and the inner part in the fall.

Zone 3 (19.5 km²): This zone is described as the area from the coastal low water mark seaward to the three entrances connecting Gilbert Bay to the Labrador Sea. This is considered to be an important feeding area, particularly for mature cod that migrate from and through Zones 1 and 2. These cod are known to concentrate in a number of areas within Zone 3. Fin fish species diversity is considered to be highest in this area.

Figure 2: Gilbert Bay Marine Protected Area Management Zones.

3.0 MANAGEMENT OF THE MARINE PROTECTED AREA

3.1 The Conservation Objectives

To ensure that the regulations and management actions are effective, there must be a standard against which they can be judged and measured. That standard is provided by the conservation objectives within this Plan. Conservation objectives have been developed by DFO in collaboration with the Advisory Committee, and have been broken down into regulatory and non-regulatory conservation objectives.

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Regulatory conservation objectives refer to those for which the MPA was created and are subsequently supported through the development of site specific regulations. In Gilbert Bay, the impetus for the development of an MPA was the protection of a genetically distinct resident cod population, and the habitats on which it relies. Therefore the primary regulatory-based conservation objective for the Gilbert Bay MPA is:

- *The conservation and protection of the Gilbert Bay cod and its habitats.*

Non-regulatory conservation objectives refer to those which are not supported through regulations. While not directly related to the conservation and protection of the Gilbert Bay cod and its habitats, non-regulatory conservation objectives do support general marine conservation and the overarching goals of the Advisory Committee. The non-regulatory conservation objectives are:

- *The conservation and protection of the Gilbert Bay ecosystem.*
- *The promotion of scientific research opportunities on the Gilbert Bay ecosystem.*
- *The promotion of public awareness, education, and support of the Gilbert Bay MPA.*

3.2 Program Activities and Achievements

The main activities of the Gilbert Bay MPA program include scientific monitoring, enforcement and compliance monitoring, and a variety of public awareness and education projects. Advice and discussions on these activities are solicited at MPA meetings held in the Gilbert Bay area. This section highlights the major activities and achievements completed as part of the first iteration of the Gilbert Bay Management Plan.

3.2.1 Science Research and Monitoring

Since scientists from MUN first began studying Atlantic Cod in Gilbert Bay in 1996, significant work has been completed. By 1998, a collaborative monitoring program was established by MUN and DFO with assistance from the NunatuKavut Aboriginal Fishery Guardians. During the first phase of MPA management, the science monitoring program involved four components:

- Monitoring the Gilbert Bay cod population;
- Impacts of fishing;
- Habitat identification and mapping;
- Water quality monitoring.

Gilbert Bay cod monitoring

Data on the cod population has been collected annually from 1998 to 2011 and is incorporated into a DFO database. This program collects data on: physical oceanography, densities of cod eggs, pelagic juveniles, zooplankton, adult cod age distribution and abundance within the MPA, and the seasonal migration patterns of Gilbert Bay cod using an established acoustic monitoring network.

The Gilbert Bay cod monitoring program was formally reviewed and validated by DFO Science Branch through a Canadian Science Advisory Secretariat (CSAS) Regional Advisory Process (RAP) in October 2009 (DFO, 2010). Details on the RAP recommendations are presented in Section 3.3 and results from the cod monitoring program are presented in Section 3.3.2.

Impacts of fishing

Research on the impacts of fishing was completed by Hu and Wroblewski (Hu and Wroblewski, 2009). Their modelling suggested that a recurring annual recreational food fishery totalling more than a few thousand kilograms could have serious implications for rebuilding of the Gilbert Bay cod population. MPA science monitoring (tagging and research CPUE) results also suggest that recent fisheries are having negative impacts on cod abundance (Morris and Green, 2010).

Research on scallops in Gilbert Bay was also undertaken as part of the first Hu's Masters research in this area. Scallops residing in Gilbert Bay have slower growth rates than other scallop populations in Newfoundland and Labrador (Wroblewski *et al.*, 2009). The protection afforded scallops through the closure of Zone 1 A and 1B may lead to a build up of larvae and possibly help maintain landings in Zones 2 and 3.

Habitat identification and mapping

Habitat mapping was initiated in 2002 and continued from 2005 to 2007. All phases of the multibeam habitat mapping in the MPA have been completed and results can be found in the associated reports (Copeland *et al.*, 2006:2007:2008). This data allowed the identification of important habitats in the Gilbert Bay MPA including coralline algae beds. Coralline algae provide an important habitat for cod prey items such as brittle stars & scallops (Morris and Green, 2002). Complex structures, such as coralline algae beds, are known to provide important juvenile cod habitat (Laurel *et al.*, 2003). Critical habitat for adult cod includes spawning areas and feeding areas. The Shinneys (Zone 1B) has been identified as the most important spawning area (Morris and Green, 2002). Zone 3 and areas several kilometres outside the MPA boundaries, including Alexis Bay, have been identified as important feeding areas.

Water quality monitoring

A water quality monitoring plan was developed in 2005 to assess the impacts of the William's Harbour sewage outfall which discharges into Tabbey's Harbour, inside Zone 3 of the MPA. The objectives of the monitoring plan

include: no loss or significant degradation of habitat; no visible oil slick or floating debris; no offensive odour; and no significant degradation of water clarity or quality in the area of the sewage outfall compared to two reference sites. Water quality monitoring conducted annually from 2005-2007 and in 2009 concluded that the outfall has no significant impact on marine ecosystem health. Given that the outfall has primary treatment and the population served by the outfall is small (thirty), water quality degradation associated with the outfall is not expected to be an issue in the future. Therefore it was recommended that the monitoring program be suspended until such time that activity in the vicinity of the MPA warrants further water quality assessment in Tabbey's Harbour or any other area of the MPA.

Other monitoring events - environmental quality

Oil storage and transportation within or adjacent to the MPA is a potential concern since fuel oil spills can be very harmful to marine species and habitats. An inspection of a series of abandoned oil tanks and barrels in William's Harbour and George's Cove in 2005 indicated that most were empty and did not pose an environmental risk, but should be cleaned up. The issue of debris was brought forward when fire destroyed a wharf in William's Harbour, which is the gateway to the MPA where the ferry docks and the unsightly remains detract from the pristine value of the area and associated ecotourism opportunities. A letter was written to DFO by the GBAC to request that court fines from convictions within the region be diverted towards Gilbert Bay and Labrador Southeast Coastal Action Program (LSCAP) projects aimed at enhancing and promoting the pristine environment of the region and supporting viable research, stewardship and ecotourism projects. The penalties are paid to the provincial court clerk then redistributed to DFO to be used by the Minister to promote the proper management and conservation and protection of fish or fish habitat. Although the court will not allocate funds to a specific group, the letter is now on file and can contribute to DFO's plan to allocate any funds that become available through this process.

On September 19, 2009 an oil spill occurred inside the Gilbert Bay MPA at Tabbey's Harbour while a tanker was delivering oil to the diesel generating station operated by Newfoundland Hydro. Following a joint investigation by DFO and Environment Canada (EC) charges were laid on June 30, 2011. The captain and the company, Coastal Shipping Limited, were charged under Section 36(3) deleterious substance, 38(4) reporting, and 38(5) reasonable measures of the *Fisheries Act*. Violations under Section 36(3) of the *Act* carry fines and penalties up to $300,000 for a summary conviction and $1 million for an indictable offence. This event prompted the development of an MPA environmental emergency protocol which is presented in Section 4.1.

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3.2.2 Enforcement and Compliance Monitoring

The GBAC raised concerns about poaching within the MPA. Critical periods have been identified as:

- The summer months when commercial and recreational cod fisheries are permitted in the areas surrounding the MPA, and the aboriginal gillnet fishery for trout is permitted in Zones 2 & 3 of the MPA.
- The fall season (September – November) when the MPA may be susceptible to illegal fishing activities due to the reduced presence of licensed fish harvesters.

In order to ensure adequate surveillance and enforcement within the MPA, Oceans Division entered into a Service Level Agreement (SLA) with Conservation and Protection (C&P) in 2007 to include extra patrols during these critical periods. C&P officers are assisted by NunatuKavut Aboriginal Fishery Guardians and occasionally by Provincial Conservation Officers. The SLA has been renewed annually and will continue as long as funding allows.

Approximately 137 patrols (85 boat, 39 snowmobile and 13 aircraft surveillance) of the MPA were completed under the SLA's between 2007 and 2011. A total of 45 searches were preformed and no illegal activities were found inside the MPA. Fishery officers believe that the increased presence has deterred most poachers from being active in the MPA. The relationship between the community and DFO is strong and it's believed that any illegal activity in the area would be reported.

3.2.3 Public Awareness and Education

Public awareness, supported by educational and stewardship initiatives, is important in ensuring a high degree of compliance. Knowledge and understanding of the ecological and cultural importance of Gilbert Bay is likely to further instil an attitude of appreciation and pride from people living, working and visiting the area. While in most instances this already exists within the communities adjacent to Gilbert Bay, the education program will provide sources of information in a form which caters to specific groups, including schools, nearby communities, local fishers, non-governmental organizations, and other government agencies. Public awareness and education will continue to be an important component of the Gilbert Bay MPA program in the new phase of MPA management.

Logo Development

A logo was developed for the Gilbert Bay MPA in 2003 to help raise awareness and interest in the MPA. This logo continues to be associated with the MPA and is used on caps, tee shirts and other promotional items in support of the MPA program and the general public at local events.

Signage

MPA signs marking each of the zones have been installed at the boundaries making it clear to users when they are entering into the MPA. This ensures due diligence in informing people of the site's protected status. Information signs have also been posted in Port Hope Simpson, Battle Harbour and in the local ferry terminals. The production of these signs was funded by Newfoundland and Labrador Hydro.

Golden Cod Festival

The Golden Cod Festival is a community event held every August in William's Harbour since 2002. Music, food, activities, games and prizes are provided to help celebrate the local community and its connection to the land and sea. The GBAC sets up a display to share information on the Gilbert Bay MPA and helps to organize and raise awareness of the event.

Coastal Current Newsletter

Since 2004, the *Coastal Current* has been developed to inform stakeholders about issues related to the Gilbert Bay and Eastport MPAs. This 2-page newsletter provides information about the MPAs, and related articles of interest. Three to four issues are published annually and distributed to over 2000 recipients, including the residents of the Eastport Peninsula and Port Hope Simpson, Labrador (including nearby areas) and other interested persons. It is anticipated that the newsletter will continue to be distributed as often as needed to ensure that relevant information is shared with the MPA community.

Meetings

DFO has worked collaboratively with stakeholders and interested parties in the development and management of the Gilbert Bay MPA. This collaboration was facilitated through bi-annual meetings of the GBAC in Port Hope Simpson or William's Harbour, a public meeting held annually in a local community, an annual science briefing to present the results of the monitoring and research and receive feedback and questions from stakeholders. As part of the Management Plan review in 2012, an Annual General Meeting of the MPA Advisory Committee will take place, combined with the annual science briefing and public meeting to provide update on status of the Gilbert Bay MPA.

3.3 Management Plan Review

The Management Plan review process examined the conservation objectives of the MPA to determine if they remain appropriate (RAP), evaluated the management actions in terms of achieving the conservation objectives, and identified important issues for the future management of the MPA (results of cod monitoring program and public consultations). The 2013-2018 Management Plan presented here was developed based on the results of the scientific and enforcement monitoring programs, advice from regional stakeholders, Ecosystems Management, Science, and Fisheries Management branches of DFO. Changes to the Management Plan include a September start date for cod outside the MPA, an expanded science monitoring program with new genetic work, and tagging studies outside the MPA. Other changes reflected in the Management Plan include the evolution from a steering committee to an advisory committee, holding an annual general meeting instead of several Committee meetings per year, and the discontinuation of an MPA community coordinator position.

DFO

3.3.1 Regional Advisory Process (RAP)

A Science Advisory Meeting was held in 2009 and was attended by biologists and researchers from DFO and MUN as well as representatives of the Gilbert Bay MPA Advisory Committee. This process reviewed the indicators, strategies and protocols for the Gilbert Bay MPA cod monitoring program (DFO, 2010; Morris and Green, 2010). The five indicators used to assess the effectiveness of the regulatory conservation objectives were presented and participants agreed that these indicators (outlined in Table 1) were sufficient to monitor the Gilbert Bay cod population. Conclusions and recommendations of the workshop (DFO, 2010) are sumarized below:

- The five indicators currently being used to monitor the Gilbert Bay cod population and their respective sampling and analytical protocols, are appropriate and sufficient to monitor the MPA against its conservation objective(s).
- Data from the five indicators currently being used to monitor the Gilbert Bay cod population are sufficient to assess the status of the Gilbert Bay cod population.
- Current indicators used in the assessment of the Gilbert Bay cod population indicate a decline in abundance.
- Current indicators used in the assessment of the demographics of the Gilbert Bay cod population also suggest that the population may decline further due to decline in reproductive potential.
- Given the current status of the Gilbert Bay cod population and the indication of poor recruitment in recent years, the removal of an unknown number of spawners in the area adjacent to the MPA by the commercial fishery is a concern.
- Further research is required to develop or improve indicators for monitoring natural and anthropogenic pressures on the Gilbert Bay cod population.
- Given recent advances in telemetry and the current telemetric infrastructure in place for monitoring the Gilbert Bay cod population, enhancing the use of telemetry to indicate movements of large cod between the MPA and adjacent areas would prove useful to further understanding sources of mortality of Gilbert Bay cod.
- Reference levels for the Gilbert Bay cod population should be explored to provide a benchmark against which to better determine population status in future assessments.

3.3.2 Results of Gilbert Bay Cod Monitoring Program

Although Gilbert Bay cod were initially thought to remain inside the MPA boundaries throughout the year, acoustic telemetry and the tagging program has shown that large (commercial size) Gilbert Bay cod move into Alexis Bay during the summer to feed, and return to the MPA to spawn and over-winter. The results of the monitoring program have shown a steep decline in Gilbert Bay cod, particularly the large (commercial size) cod, since the re-opening of the commercial and recreational cod fisheries in 2006. The decline in number and biomass of Gilbert Bay cod inside the MPA based on catch per unit effort (CPUE) corresponds closely to fishing effort (landings) near Gilbert Bay (area 2Jm), outside the MPA (Morris and Green, 2010). This data is shown in Figure 3 below, with the blue squares showing the decline in Gilbert Bay cod, while the grey bars show the increasing commercial catch.

The timing of the fishery is a key factor affecting the proportion of Gilbert Bay cod captured since the tagging data indicates that Gilbert Bay cod begin to return to the MPA in late July. Although migration patterns vary slightly from year to year, recent data indicate that an estimated 70% of tagged fish returned to the MPA by September 1. Figure 4 below shows the susceptibility of Gilbert Bay cod to fishing mortality based on the time when fish are outside the MPA.

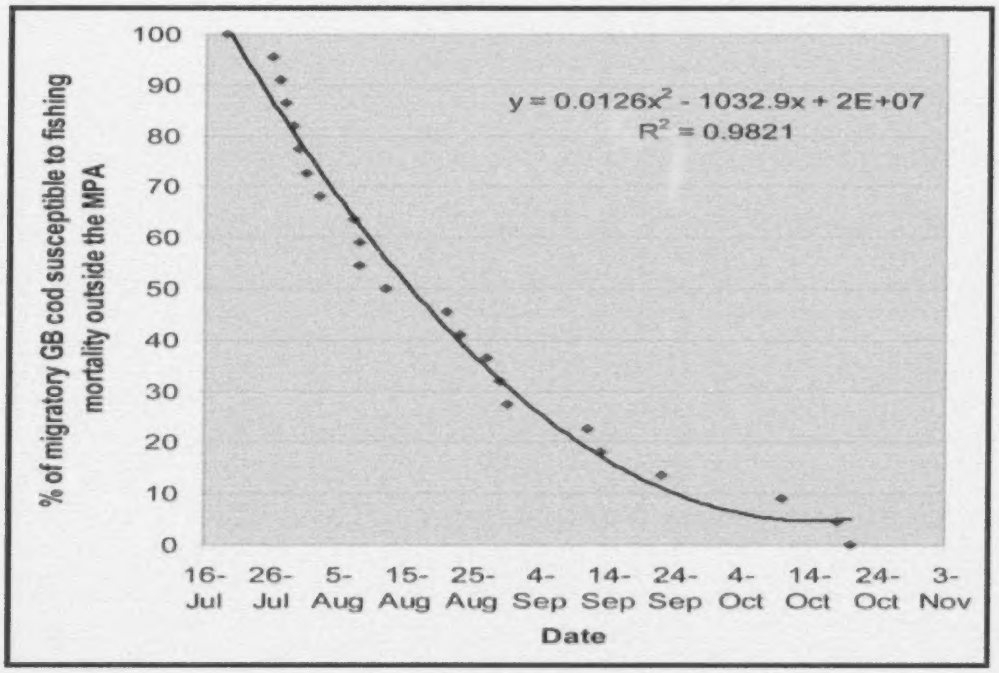

Figure 3. Commercial cod landings near Gilbert Bay and corresponding decline in Gilbert Bay cod within the MPA.

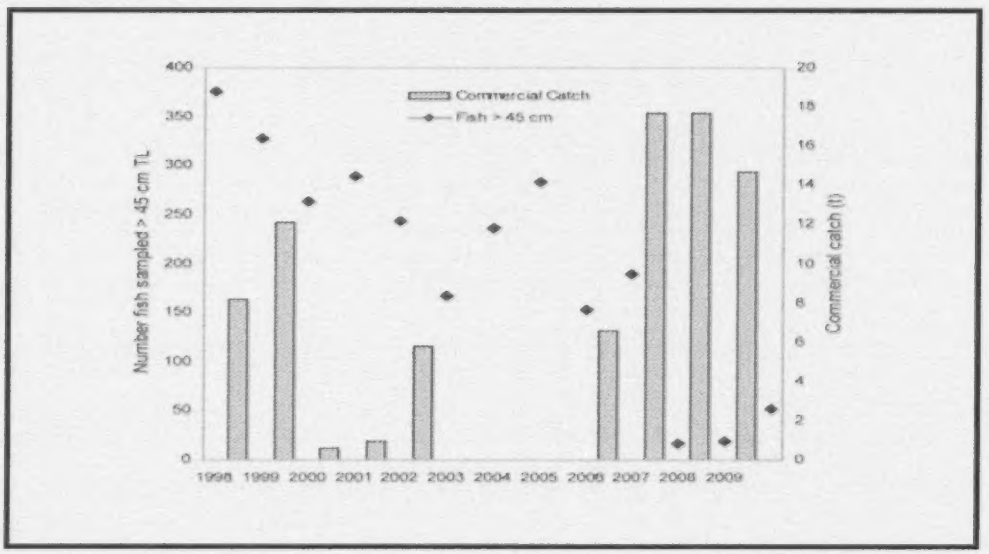

Figure 4. Seasonal changes in susceptibility of Gilbert Bay cod to fishing mortality near the Gilbert Bay MPA.

This data clearly indicates that a fall fishery would reduce Gilbert Bay cod mortality. Season dates are set by DFO based on a variety of factors, and over the last 10 years opening dates for the Stewardship and Recreational cod fisheries have ranged from early July to early September. Based on logbook data from 1998 – 2009, three 'risk periods' have been identified for September in which Gilbert Bay cod are more likely to be captured in the Stewardship fishery. These risk periods are high (before September 1), medium (September 1-14), and low (after September 15). Data for 2006 through 2008 show a high proportion of the harvest was taken during the high and medium risk periods, while in 2009 the season opened in early September and consequently the majority of the harvest was conducted during the low risk period.

3.3.2 Results of Consultations and Surveys

Public consultations 2010

Management Plan review, and in particular the issue of the decline in Gilbert Bay cod, called for broad public consultations to ensure that any action is undertaken with the full knowledge and support of the local stakeholders. In 2010, public meetings were held in Port Hope Simpson, William's Harbour, Charlottetown, and Mary's Harbour. The results of the cod monitoring program were presented at each meeting, all potential sources of cod mortality and management options were discussed, and all comments were recorded. Feedback is summarized in the points below:

Decline in Gilbert Bay cod

- Some local harvesters expressed doubt that fishing mortality was solely responsible for the decline in Gilbert Bay cod since it was felt that fishing effort and landings in the area have declined in recent years. However, logbook data from the cod Stewardship fishery shows that landings in 2Jm from 2006 -2010 were the highest in nearly 20 years. Prior to 1992, Northern cod stocks were high, and therefore fishing mortality of Gilbert Bay cod was likely low despite high overall landings.
- Local harvesters reported patchy aggregations of cod and delayed arrival inshore, except in Alexis Bay near the Gilbert Bay MPA, where significant aggregations of large cod were reported in mid-summer, followed by a second aggregation in late summer/fall. The early aggregation is generally thought to be Gilbert Bay cod, while the late aggregation is thought to be Northern cod. Further genetic analysis is required to substantiate this assumption.

Potential changes to permitted fisheries

- Potential management actions to protect the Gilbert Bay cod from fishing mortality during their summer forays outside the MPA were discussed at length. Local stakeholders expressed continued support for the current MPA boundary and prohibitions, but did not support an expansion of the MPA boundaries to include Alexis Bay, as this option would force local recreational and commercial harvesters to leave the shelter of the bay and travel an extra 40 km to access the fishing grounds. The high price of gas and the low allowable catch would effectively prevent harvesters from Port Hope Simpson from taking part in the recreational or stewardship cod fisheries.
- An alternative option would be to prohibit fishing during the early season (mid- summer) when Gilbert Bay cod are thought to aggregate in Alexis Bay, but allow fishing in the fall season when northern cod are thought to move inshore. A later opening of the season in September could be implemented by DFO under the *Fisheries Act* since the area is outside the MPA. Since harvesters from the area have reported the

delayed arrival of cod inshore in recent years, a delayed opening of the fishing season may be acceptable to harvesters, and in fact the season was not opened until September 7 in 2009 and August 28 in 2010, largely based on advice from the fishing industry.

- A phone survey was suggested as a means to further explore this option with harvesters. This survey was completed in 2011 and results are provided below.
- Bycatch of Gilbert Bay cod within the Aboriginal gillnet fishery for trout in Zones 1 and 2 of the MPA was identified as a potential concern, and it was suggested that an earlier, shortened trout season could reduce cod bycatch while allowing improved enforcement, without negative impact to the fishery. Accurate monitoring of cod bycatch would be required before the benefit of any changes could be assessed, through the expansion of log book requirements to include cod bycatch, and/or a dedicated monitoring program for the fishery.

Tagging

- Conservation measures based on cod migration patterns will continue to be validated by the Science monitoring program. Options for data collection include the genetic analysis of fin clips from the early and late cod aggregations in Alexis Bay, and/or enhanced monitoring of Gilbert Bay cod migration patterns outside the MPA through sonic or acoustic tag tracking and/or reward tag returns from harvesters. DFO Science performed offshore tagging during 2012, the continuation of which will be dependent on funding availability in the future.
- Commercial fish harvesters expressed a willingness to cooperate in providing fin clips, but indicated that they would not be able to collect, bottle, label and fill in data forms while fishing, and would require a third party to do this work. Sentinel fish harvesters also expressed a willingness to collect fin clips but there is no sentinel site in Alexis Bay.
- Currently the tag reward program is not effective because tag returns are very low. Stakeholders suggested that there is concern that returning the tags will lead to an expansion of the MPA, but indicated that if this concern could be alleviated, they would be willing to cooperate.
- They recommended that the program should be administered locally in order to build a higher level of trust and cooperation, and improve both the quality of data and speed up the return of the reward to participants. This was addressed during the 2011 season when local Fisheries Officers aided in the collection of fin clips for DFO Science.

Environmental affects

- It was suggested that climate change may be affecting the cod population and/or the Science monitoring results by affecting the movements and behaviour (spawning time) of the population. In response, researchers indicated that the Science monitoring is conducted in spring following ice break up, as spawning is triggered by the influx of fresh water as much as by temperature. The monitoring results have not detected any significant change is the physical oceanographic parameters (temperature/salinity), the appearance of cod eggs and pelagic juveniles, or the movement of cod during the spring monitoring period. For these reasons it is not felt that changing climate is affecting the accuracy of the population estimate.

Predation and competition

- Increased seal densities were observed in the MPA area in spring. It was felt that increased seal predation may be a factor in the declining Gilbert Bay cod population, but it was noted that seals are known to prefer

oily prey species such as herring and salmon. Increased competition and/or predation associated with increased densities of Northern cod or other species such as haddock were also suggested as potential factors contributing to the decline in Gilbert Bay cod, but since the Northern cod population has been reduced to less than 1% of its former biomass (Hutchings, 2004), this is not considered to be a likely cause of the decline.

Enforcement

- Enforcement of current prohibitions within the MPA was noted as a concern, particularly in the Recreational cod fishery where it was felt that awareness of the MPA boundaries and prohibitions is often low, and illegal fishing may occur unintentionally. Signs have been erected at the MPA boundaries as well as information signs in the local nearby communities of Port Hope Simpson and Battle Harbour and on the ferries. Public information sessions are held in the area every year giving the general public ample opportunity to put forth these sorts of concerns.

Community support

- Local stakeholders are looking for some clear indication that the MPA is beneficial. This may include positive results in terms rebuilding of the resource, or economic benefits to the community in terms of jobs, indirect economic spin off, or increased tourism potential. Other less tangible benefits may include the development of valued relationships between local stakeholders and government representatives and researchers, providing stakeholders with a voice, and ultimately a sense of ownership and stewardship of the resource. In this respect local involvement in the project is vital, particularly for harvesters since they are most affected by the MPA prohibitions and have the most to benefit from the conservation efforts.
- Although it is recognized that MPAs are generally a long term conservation tool, the decline in Gilbert Bay cod following five years of protection is disheartening, and a renewed effort to build local support over the next five year period is crucial.

Phone survey 2011

The management option of delaying the opening of the fishery was further explored through telephone consultations with fish harvesters licensed to fish in NAFO area 2J. The survey included questions on the availability of cod in the summer and fall, and the support for consistent opening dates in September.

- 140 fishers were licensed to harvest in NAFO area 2J (2010 – 2011). Of these, 40 had home ports within 15 – 20km of the Gilbert Bay MPA and considered core harvesters. A total of 47 harvesters completed the survey (of which ~50% were core harvesters).
- 65% indicated that they would NOT be negatively impacted by a Sept. 7 – Oct. 7 season, and 57% indicated that they would NOT be negatively impacted by a Sept. 15 – Oct. 15 season. The preferred season start date from the list provided was Sept. 7, while Sept. 1 and Sept. 15 were the second most popular choices.

Creel survey 2011

A creel survey is an estimation of anglers' catches, by a sampling program involving interviews and inspection of individual catches. C&P officers from the St. Lewis detachment conducted a creel survey to obtain information on fishing location, gear, effot, and catch.

- Only two vessels were encountered and surveyed during the survey, both located adjacent to the Gilbert Bay MPA. All harvesters were utilizing handlines.

- Vessel 1 had 3 harvesters on board and had landed 300 kg of cod over a period of 3 hours. They reported that about 25% of the fish had a golden hue and were thought to be Gilbert Bay cod. Vessel 2 had a single harvester on board and had landed 220 kg of cod in 3 hours. Only a few of these had a golden hue and were thought to be Gilbert Bay cod.
- Fin clips were collected from 50 fish and will be used to verify the proportion of Gilbert Bay cod from genetic testing.

Summary

Table 1: Summary of Consultations

Location:	Date:	Number in Attendance:
Port Hope Simpson	Oct 19, 2010	8 + (5 DFO)
William's Harbour	Oct 18, 2010	5 + (5 DFO)
Charlottetown	Oct 20, 2010	4 + (2 DFO)
Mary's Harbour	Oct 21, 2010	5 + (2 DFO)
Phone survey	Oct – Nov 2011	47
Creel survey	Sept 7, 2011	2

Public meetings in Port Hope Simpson, William's Harbour, Charlottetown and Mary's Harbour, resulted in the following recommendations:

- Explore options to reduce pressure on the Gilbert Bay cod population. As suggested during consultations, a consistent and later Stewardship fishery opening date has been agreed upon with harvesters and Fisheries Management Branch of DFO.
- The Gilbert Bay cod migration patterns outside the MPA and fishing mortality were identified as key data gaps, with enhancement to the tracking, genetics, and tag reward programs recommended. Conservation measures based on cod migration patterns will continue to be validated by the Science monitoring program.
- The success of the MPA was thought to be closely tied to the level of local support and community involvement in the MPA including research, monitoring, educational programs, and community coordination. There was general agreement that other funding sources and partnerships are required to support these types of programs.
- Enhanced involvement of local harvesters in research and monitoring.
- Development of educational programs targeting youth, designed to build support and interest in science and resource management in the younger generation as well as their parents and close relatives.
- An enhanced role for local organizations.
- In addition, there was a general agreement that other funding sources and partnerships are required to support these types of programs, and explore compatible opportunities for sustainable economic development. These suggestions will be followed up in consultation with DFO Science, DFO FM, DFA, LSCAP, the NCC, the Regional Development Board and other interested or affected parties.

3.4 Management Strategies and Actions

Based on the results of the Management Plan review, a series of revised management strategies and associated short and long term management actions were developed by DFO in collaboration with the Advisory Committee in order to meet each of the regulatory and non-regulatory conservation objectives. The management strategies associated with the regulatory conservation objective are show in Table 2, along with the relevant legislation and management responsible for each activity.

Table 2: Gilbert Bay MPA Regulatory Conservation Objective and Management Actions

Regulatory Conservation Objective: Conserve and protect the Gilbert Bay cod population and its habitats		
Strategies	**Management Action**	**Related Legislation/ Responsibility**
Ensure that commercial fishing for cod does not take place within the MPA	**Long term** • Continue prohibition of commercial cod fishing within all zones of the MPA.	*Gilbert Bay Marine Protected Area Regulations*/DFO Oceans & DFO Science
Monitor the Gilbert Bay cod population	**Short term** • Continue to monitor and assess the Gilbert Bay cod population using the following five indicators: - Recruitment of age 0 pelagic juvenile abundance - Recruitment, relative abundance, and year class strengths based on age 2, 3 and 4 year old Gilbert Bay cod - Research Catch Per Unit Effort (CPUE) - Seasonal movement patterns in relation to population demographics and MPA boundaries - Localized commercial, recreational, sentinel, and aboriginal catch rates and fishing effort. **Long term** • Use this information to define a biological reference point above which the Gilbert Bay cod population can be considered "at an acceptable level".	*Gilbert Bay Marine Protected Area Regulations*/DFO Oceans & DFO Science

Table 2: cont'd

Regulatory Conservation Objective: Conserve and protect the Gilbert Bay cod population and its habitats		
Strategies	**Management Action**	**Related Legislation/ Responsibility**
Ensure that recreational fishing for cod does not take place within Zone 3 of the MPA until the status of the stock reaches an acceptable level.	**Short term** • Continue prohibition of recreational cod fishing within Zones 1 and 2 of the MPA. • Continue closure of the recreational cod fishery in Zone 3 of the MPA until 2015 or until the stock reaches acceptable levels.	*Gilbert Bay Marine Protected Area Regulations* *Voluntary Fisheries Act Variation Order/DFO FM with support from the Advisory Committee*
Identify and quantify key sources of fishing mortality of Gilbert Bay cod	**Short term** • Analyse log book data from Stewardship fishery on an annual basis for NAFO Area 2Jm. • Develop a monitoring plan to accurately estimate the proportion of Gilbert Bay cod in the total Stewardship fishery harvest for NAFO Area 2Jm. Suggested tools include acoustic telemetry, genetic analysis of fin clips, and the tag reward program. • Potential partnerships include the NunatuKavut Community, local harvesters, and sentinel fishers. **Long term** • Reduce fishing mortality to acceptable level through implementation of appropriate management actions, based on the results of the fishing mortality monitoring programs.	*Gilbert Bay Marine Protected Area Regulations /DFO Science &DFO Oceans with advice from Advisory Committee*

Table 2: cont'd

Regulatory Conservation Objective: Conserve and protect the Gilbert Bay cod population and its habitats		
Strategies	**Management Action**	**Related Legislation/ Responsibility**
Develop conservation measures to reduce fishing mortality of Gilbert Bay cod outside the MPA until the population reaches an acceptable level.	**Short term** • Implement conservation measures to reduce fishing mortality of Gilbert Bay cod outside the MPA. These measures could include a late season opening date (approx. Sept 7) for the Stewardship and/ or Recreational cod fisheries in 2Jm. **Long term** • Implement measures to reduce fishing mortality of Gilbert Bay cod outside the MPA until the stock reaches an acceptable level.	*Atlantic Fisheries Regulations/DFO FM with support from DFO Oceans and local harvesters* *Voluntary Fisheries Act Variation Order/DFO FM*
Ensure scientific research is for the purpose of conservation, protection, ecological understanding or improvement of the Gilbert Bay MPA	**Short term** • Develop annual Activity Plans and Approvals as outlined in Section 5.0 in the MPA Regulations prior to conducting scientific and educational activities within the MPA.	*Section 5, Gilbert Bay Marine Protected Area Regulations/DFO*
Ensure water quality is maintained	**Long term** • If there is reason to suspect the potential degradation of water quality within the MPA, reinitiate the Marine Environmental Quality Monitoring Program. Depending on the nature and suspected source of the degradation, (e.g. significantly increased sewage discharge, or pollution incident), revise the monitoring protocol accordingly. • Inform appropriate regulators of the status of abandoned tanks in the area and express concerns regarding this issue. Continue to investigate opportunities to support clean up operations. Potential partners/funding opportunities include LSCAP and proceeds of court fines.	*Gilbert Bay Marine Protected Area Regulations/DFO* *Fisheries Act* *Newfoundland and Labrador Environmental Protection Act* *Provincial Water and Sewer Regulations*

Table 3 outlines the management strategies and actions developed for the 3 non-regulatory conservation objectives. These management actions provide indirect support for the regulatory conservation objective by identifying the activities which will be undertaken to reach conservation goals and improve the effectiveness of the MPA. Some changes have been made to the short and long term actions based on the Management Plan review.

The Gilbert Bay Advisory Committee has the lead responsibility for many of these non-regulatory objectives and their associated management actions, which should be conducted in collaboration with DFO, and by fostering partnerships with other interested parties or organizations.

Table 3: Gilbert Bay MPA Non-Regulatory Conservation Objectives and Management Actions

Non-Regulatory Conservation Objective: Conserve and protect the Gilbert Bay marine ecosystem		
Strategies	**Management Action**	**Responsibility**
Identify the importance of Gilbert Bay for marine mammals	**Long term** • Look for opportunities to collaborate with Quebec Labrador Foundation and NunatuKavut Community to observe marine mammals in and around the MPA.	*DFO Oceans and the Gilbert Bay Advisory Committee*
As required, take note of the potential impact of forestry operations in the watersheds associated with Gilbert Bay	**Long term** • DFO and GBAC to work with the Department of Natural Resources to ensure forestry operations in the Gilbert Bay and adjacent watershed areas have minimal impact on the Gilbert Bay ecosystem.	*Gilbert Bay Advisory Committee*
Review environmental impact assessments for any proposed new developments in the Gilbert Bay area	**Long term** • If considered appropriate, environmental assessments can be supported for new developments.	*Gilbert Bay Advisory Committee*

Table 3: cont'd

Non-Regulatory Conservation Objective: Promote scientific research opportunities that will benefit the marine ecosystem of Gilbert Bay		
Strategies	**Management Action**	**Responsibility**
Encourage appropriate scientific research and collaboration	**Short term** • Continued collaboration with NunatuKavut Community to build capacity, scientific knowledge, and expertise. **Long term** • Encourage honours, graduate, and doctoral students to focus their research on understanding the Gilbert Bay ecosystem. • Build continued interest, expertise, and capacity for scientific research that will benefit the marine ecosystem of Gilbert Bay.	*DFO Oceans and the Gilbert Bay Advisory Committee*

Non-Regulatory Conservation Objective: Promote public awareness and education of the Gilbert Bay MPA		
Strategies	**Management Action**	**Responsibility**
Raise public awareness and education	**Short term** • Continue future issues of the Coastal Current and updating the Gilbert Bay MPA website. • Conduct an Annual General Meeting of the MPA Advisory Committee to ensure stakeholder support and involvement, combined with annual science briefing and public meeting to provide update on status of the Gilbert Bay MPA. • Engage the NunatuKavut Community in educational events such as the Golden Cod Festival. **Long term** • Collaborate with LSCAP and the NunatuKavut Community to develop and implement an environmental education program for schools and youth groups.	*DFO Oceans and the Gilbert Bay Advisory Committee*

3.5 Activities within the Gilbert Bay MPA

Upon designation of Gilbert Bay as an MPA, the *Gilbert Bay Marine Protected Area Regulations*, established under the *Oceans Act*, prohibited activities that conflict with the purposes of the MPA, allowing for the protection of marine species and their habitats. The complete Gilbert Bay MPA Regulations are attached (see Appendix B). Although these regulations provide the primary tool for protecting the MPA, activities within the MPA may also be subject to provisions from other legislation, regulations and policies including the *Aboriginal Communal Fishing Licences Regulations, Marine Mammal Regulations, Atlantic Fishery Regulations, 1985, Newfoundland and Labrador Fishery Regulations, Navigable Waters Protection Act, Fisheries Act, Environmental Protection Act, Water Resources Act, Waste Disposal Act,* and the *Pesticides Act*. Activities within Gilbert Bay that do not result in significant impact to the MPA are exempted from the prohibitions. Conduct of scientific or educational activities within the Gilbert Bay MPA may be granted after obtaining approval through an activity approval process (see Appendix A).

Table 4 summarizes the management regime for the MPA by identifying the existing activities within the MPA, the potential impacts, and the responsible authorities with associated legislation. Additional detail may be obtained from the offices of the respective authorities or departments identified.

In keeping with the colour scheme used in Figure 1, the three colours in Table 4 reflect the varying levels of protection within the MPA and therefore varying degrees of permissible activities within the zones. Red signifies a high level of protection with the greatest restriction on activities, amber an intermediate level, and green the lowest level of protection with minimal restrictions.

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Table 4: Activities within the Gilbert Bay MPA, Activity Management, and Potential Consequences

Activity Recreational Fisheries		
Gilbert Bay MPA Regulations Permissible Activities **Zone 1:** Angling for Arctic Char, salmon or trout (Section 4. (a)(iii)(A)) **Zone 2:** Any species other than Atlantic Cod (Section 4. (a)(iii)(B)) **Zone 3:** Any species other than Atlantic Cod – due to variation order under Fisheries Act * (Section 4. (a)(iii)(C))	**Who is Responsible** Lead by DFO with input from provincial government, stakeholders and aboriginal groups.	**Other Related Legislation** Atlantic Fishery Regulations, 1985 or the Newfoundland and Labrador Fishery Regulations
Management In order to protect migratory species such as Atlantic salmon, two areas of Gilbert Bay (which equate to Zone 1 of the MPA) have been designated as Inland Waters since the early 1990s under the Newfoundland Fishery Regulations/Atlantic Fishery Regulations. These regulations permit fishing for Arctic char, salmon or trout using angling gear only. These areas are closed to all commercial fishing that use gillnets. Zones 2 and 3 are open to commercial fisheries such as scallop and whelk but no fishing for cod either by Recreational or Commercial fisheries is permitted. Recreational angling for trout, char, and salmon, as well as gillnetting for trout, salmon, and char is allowed in these zones. * The MPA regulations currently allow a recreational fishery in Zone 3, however, due to decline in Gilbert Bay cod, Zone 3 has been closed by variation order under the Fisheries Act, and this closure is expected to continue until the Gilbert Bay cod population reaches acceptable levels. **Potential Consequence** The Zone 1/Inland Waters designation provides indirect protection to critical habitat of the Gilbert Bay cod population (i.e., spawning and nursery grounds) from bottom contact gear and net fishing that might have a significant bycatch of cod.		

Table 4: cont'd

Activity Commercial Fisheries		
Gilbert Bay MPA Regulations Permissible Activities	**Who is Responsible**	**Other Related Legislation**
Zone 1: None (Section 4. (a)(iv)) Zone 2: Any species other than Atlantic Cod (Section 4. (a)(iv)) Zone 3: Any species other than Atlantic Cod (Section 4. (a)(iv))	Lead by DFO with input from provincial government, stakeholders and aboriginal groups.	Atlantic Fishery Regulations, 1985 or the Newfoundland and Labrador Fishery Regulations

Management

Prior to April 2003, a variation order under the Fisheries Act closed a large part of the main arm of Gilbert Bay to cod fishing. Commercial fishing of cod within NAFO Divisions 2J3KL was under a moratorium from 2003-2005. The Gilbert Bay MPA regulations, which came into effect in October 2005, prohibit commercial fishing for cod within all zones of the GB MPA.

Zone 1 of the MPA has been designated as Inland Waters since the early 1990s. Within Inland Waters all fishing other than angling is prohibited, except for the Aboriginal Food Fishery. Outside of the Zone 1 Inland Waters, fishing for other commercial species other than cod, (i.e., scallops) is permitted.

Potential Consequence

Zone 1 has the highest concentrations of cod found within Gilbert Bay, and has been identified as sensitive, providing important spawning, rearing, feeding, and juvenile habitat for Gilbert Bay cod. This zone is also important for migrating salmon, char, and trout, and has a number of capelin beaches, and pristine maerl beds. Due to the importance of this area in the life cycle of the cod, Zone 1 has been given the highest level of management protection, and no commercial fisheries are permitted. This prohibition provides protection to sensitive habitats and dense aggregations of cod.

In Zone 2 and 3, cod bycatch may be significant in some gillnet fisheries, and impacts on habitat may also occur as a result of bottom contact fisheries which require contact, or penetration of the seabed to catch the target species (i.e., scallop dredging). Disturbance of the seabed, particularly in areas where natural disturbance is low, can cause significant changes in the habitat and associated benthic communities (Gubbay and Knapman, 1999).

Table 4: cont'd

Activity Aboriginal Food Fisheries		
Gilbert Bay MPA Regulations Permissible Activities Zone 1: Angling for salmon, trout, char. (Section 4. (a)(i)) Zone 2: Angling for salmon, trout char. Fishing for salmon, trout, char, herring, scallop, whelk, smelt (Section 4. (a)(i)) Zone 3: Angling for salmon, trout char. Fishing for salmon, trout, char, herring, scallop, whelk, smelt (Section 4. (a)(i))(a)(iii)(C))	**Who is Responsible** Lead by DFO with input from provincial government, stakeholders and aboriginal groups.	**Other Related Legislation** Aboriginal Communal Fishing License Regulations Inland Fishery Regulations Gilbert Bay MPA Regulations, Oceans Act (Section 4. (a)(i)) Newfoundland and Labrador fisheries Regulations section 10 (1,) and (4)
Management The Communal Fishing licenses permit fishing for food within Gilbert Bay for those species/methods identified. Fishing for salmon and char using nets is permitted in Zone 2 and Zone 3. Fishing for herring using gillnets is permitted in Zone 2 and Zone 3. Fishing for scallop, whelk, smelt is permitted in tidal waters of all Zones. Trawling for scallop is permitted in Zone 2 and 3. Commercial fishing for cod is prohibited in all zones of the MPA (condition of license). **Potential Consequence** Bottom contact and high cod bycatch fisheries are minimal in Zone 1 where dense aggregations of cod and sensitive habitat are most prevalent. In Zone 2 and 3, cod bycatch may be significant in some gillnet fisheries, and impacts on habitat may also occur as a result of bottom contact fisheries which require contact or penetration of the seabed to catch the target species (i.e., scallop dredging).		

Table 4: cont'd

Activity Sealing		
Gilbert Bay MPA Regulations Permissible Activities **Zone 1:** Fishing seals (Harp, Grey, Ringed, Bearded and Hooded) (Section 4. (a)(i)) **Zone 2:** Fishing seals (Harp, Grey, Ringed, Bearded and Hooded) (Section 4. (a)(i)) **Zone 3:** Fishing seals (Harp, Grey, Ringed, Bearded and Hooded) (Section 4. (a)(i))	**Who is Responsible** Fisheries and Oceans Canada (DFO)	**Other Related Legislation** Marine Mammal Regulations Aboriginal Communal Fishing License Regulations
Management Fishing for seals is permitted in Zone 1, 2 and 3 of Gilbert Bay MPA under the Marine Mammals Regulations and the Aboriginal Communal Fishing License Regulations, if carried out in accordance with those regulations. **Potential Consequence** The seal fishery is not expected to have any adverse affect on the MPA.		

Activity Coastal Development/Construction		
Gilbert Bay MPA Regulations Permissible Activities **Zone 1:** Maintenance, repair or removal of a wharf (Section 4. (b)(i)) **Zone 2:** Construction, maintenance, repair or removal of a wharf (Section 4. (b)(ii)) **Zone 3:** Construction, maintenance, repair or removal of a wharf, causeway or bridge (Section 4. (b)(iii))	**Who is Responsible** Transport Canada and DFO	**Other Related Legislation** Navigable Waters Protection Act or the Fisheries Act
Management Coastal development or construction may be carried out in accordance with an approval or authorization under the Fisheries Act or the Navigable Waters Protection Act, or in which case approval or authorization is not required. **Potential Consequence** The MPA is not adversely affected by coastal developments.		

Table 4: cont'd

Activity Safety, Security and Enforcement		
Gilbert Bay MPA Regulations Permissible Activities Zone 1: Any activity for the purpose of public safety, national security or law enforcement or in response to an emergency (Section 4. (c)) Zone 2: Any activity for the purpose of public safety, national security or law enforcement or in response to an emergency (Section 4. (c)) Zone 3: Any activity for the purpose of public safety, national security or law enforcement or in response to an emergency (Section 4. (c))	**Who is Responsible** National Defence, DFO	**Other Related Legislation** Fisheries Act or National Defence Act
Management Activities as necessary for the purposes of safety and enforcement are managed under the Oceans Act, Fisheries Act or the National Defence Act. **Potential Consequence** It is difficult to determine if any activity carried out for the purpose of public safety, national security, law enforcement, or in response to an emergency may adversely affect the MPA.		

Table 4: cont'd

Activity Depositing, Discharging or Dumping		
Gilbert Bay MPA Regulations Permissible Activities Zone 1: Depositing, discharge or dumping of any substance that is not likely to result in the disturbance, damage, destruction or removal of a living marine organism or any part of its habitat (Section 3. (1)(b)) Zone 2: Depositing, discharge or dumping of any substance that is not likely to result in the disturbance, damage, destruction or removal of a living marine organism or any part of its habitat (Section 3. (1)(b)) Zone 3: Depositing, discharge or dumping of any substance that is not likely to result in the disturbance, damage, destruction or removal of a living marine organism or any part of its habitat (Section 3. (1)(b))	**Who is Responsible** The Newfoundland and Labrador Department of Environment and Conservation, EC issues permits for ocean dumping	**Other Related Legislation** The Environmental Protection Act, Water Resources Act, Waste Disposals Act, Fisheries Act and the Pesticides Act regulate against these activities.
Management The discharge or dumping of anything that is detrimental to the fish or fish habitat of the Gilbert Bay MPA is not permitted. **Potential Consequence** Strict regulations are in place to avoid waste material from affecting the MPA. On-going and future ecological research and monitoring within the MPA will help to ensure water quality and marine habitats are maintained and may alert authorities of any adverse changes.		

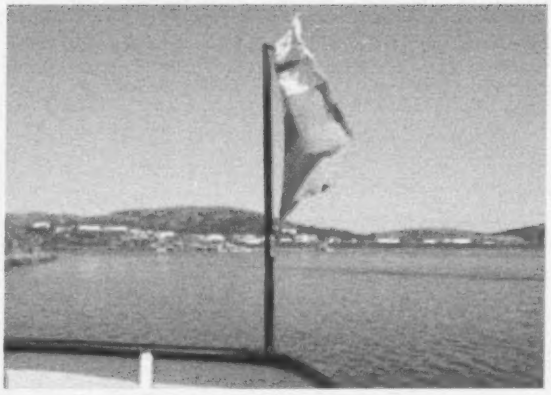
Table 4: cont'd

Activity Scientific Research		
Gilbert Bay MPA Regulations Permissible Activities **Zone 1:** Permitted by approval (Sections 3.(2), 5 and 6) **Zone 2:** Permitted by approval (Sections 3.(2), 5 and 6) **Zone 3:** Permitted by approval (Sections 3.(2), 5 and 6)	**Who is Responsible** Fisheries and Oceans Canada (DFO)	**Other Related Legislation** The Fisheries and Oceans Acts provide the authority to DFO to license and/or approve scientific research and activities. Gilbert Bay Marine Protected Area Regulations
Management Any scientific research for which an Activity Plan is approved under the Gilbert Bay Marine Protected Area Regulations is allowed within Gilbert Bay. Licenses permitting the removal of cod have been issued under the Fisheries Act and Oceans Act to researchers working in Gilbert Bay. **Potential Consequence** Any potential consequences are measured against research benefits (e.g. increased understanding of cod population) as part of the Activity Approval process.		

Activity Educational Activities		
Gilbert Bay MPA Regulations Permissible Activities **Zone 1:** Permitted by approval (Sections 3.(2), 5 and 6) **Zone 2:** Permitted by approval (Sections 3.(2), 5 and 6) **Zone 3:** Permitted by approval (Sections 3.(2), 5 and 6)	**Who is Responsible** Fisheries and Oceans Canada (DFO)	**Other Related Legislation** The Fisheries and Oceans Acts provide the authority to DFO to license and/or approve educational activities.
Management Any educational activity for which a plan is approved under the Gilbert Bay Marine Protected Area Regulations is allowed within Gilbert Bay. **Potential Consequence** The Regulations ensure that any educational activities are for the purpose of increasing public awareness of the area or providing information in respect of the conservation measures implemented in the area.		

4.0 ENFORCEMENT AND COMPLIANCE

In order to achieve the conservation objectives, effective compliance strategies are required. Following MPA establishment, the GBAC identified compliance concerns within the MPA and the enforcement and compliance monitoring program (Section 3.2.2) responded to this management requirement.



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As with any additional legislation or management measures, there will continue to be increased pressure on DFO C&P staff to gain compliance with the management objectives and to enforce MPA Regulations. The remote location of Gilbert Bay makes it difficult to patrol. Although reports from C&P officers suggest illegal fishing activity is currently low, in the past individuals have been prosecuted. There is an expectation by local residents that enforcement within the MPA will continue to be effective in order to ensure further compliance with MPA Regulations.

This component of the Management Plan will address the operational responsibilities of DFO to meet regulatory requirements. In 2007, a Service Level Agreement (SLA) between the Oceans Division and the C&P Program was signed to increase patrols in the Gilbert Bay MPA. Fisheries officers are designated as Enforcement Officers under the *Oceans Act* and have the power to collect evidence and lay charges. As outlined in the SLA, the officers make additional boat, ski-doo, and air patrols to Gilbert Bay to enforce the MPA regulations during vulnerable times of the year (see section 3.2.2). DFO conducts joint patrols with the NunatuKavut Guardians and the provincial conservation officers, practicing economic prudence and fostering good relationships amongst all fisheries enforcement personnel. These agencies have been coordinating their patrols to ensure maximum coverage of Gilbert Bay. Compliance strategies include monitoring control and surveillance activities, special investigations or undercover operations as deemed necessary and a combination of education and awareness programs. This agreement has been renewed on an annual basis and will continue as funding allows.

The aim of compliance monitoring is to promote adherence to the regulations and management measures. Non-compliance detected by patrols and inspections will result in appropriate enforcement actions. Enforcement of the regulations and subsequent offences will be dealt with under the *Oceans Act* or *Fisheries Act*, as applicable. There will also be a reliance on feedback by community members to assess the effectiveness of compliance programs and adherence to management measures. Fisheries Officers have reported excellent cooperation from community residents showing continued support for the Gilbert Bay MPA initiative.

Violations of the MPA Regulations carry penalties under the *Oceans Act* up to a maximum of $100,000 on summary convictions, to $500,000 for indictable offences. Violations of the *Fisheries Act* such as non-compliance with licence conditions or management measures carry similar penalties.

4.1 Environmental Response Protocol

The September 19, 2009 oil spill at Tabbey's Harbour highlighted the need to establish a linked but separate process for the Oceans Program in the current environmental emergency response process (Figure 5). Since this is a remote area which could compromise the collecting of evidence, it is very important for community individuals to report such incidents and learn what they could do to help (i.e., collect water, take pictures, give statements etc).

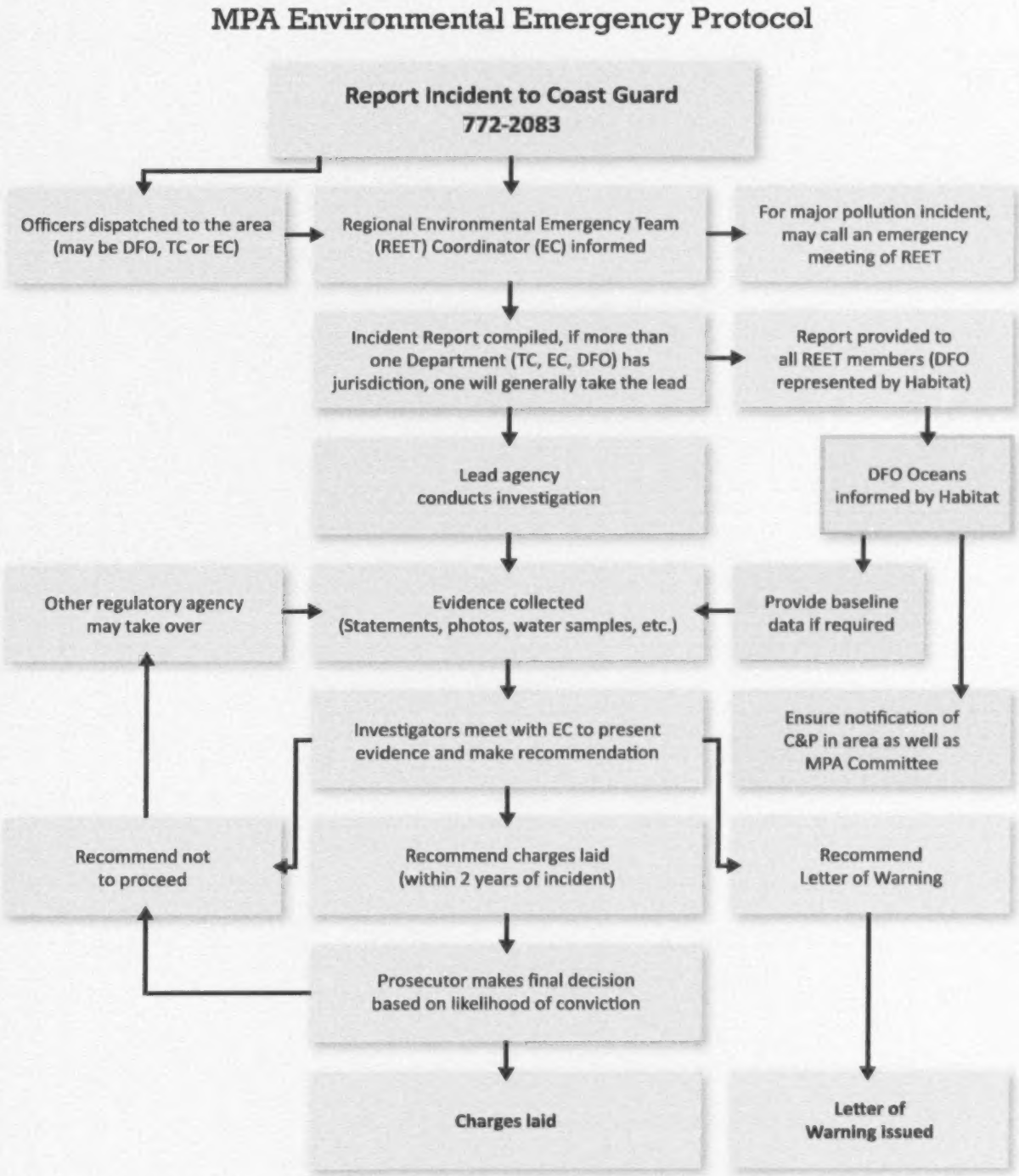
MPA Environmental Emergency Protocol
Report Incident to Coast Guard 772-2083
Officers dispatched to the area (may be DFO, TC or EC)
Regional Environmental Emergency Team (REET) Coordinator (EC) informed
For major pollution incident, may call an emergency meeting of REET
Incident Report compiled, if more than one Department (TC, EC, DFO) has jurisdiction, one will generally take the lead
Report provided to all REET members (DFO represented by Habitat)
Lead agency conducts investigation
DFO Oceans informed by Habitat
Other regulatory agency may take over
Evidence collected (Statements, photos, water samples, etc.)
Provide baseline data if required
Investigators meet with EC to present evidence and make recommendation
Ensure notification of C&P in area as well as MPA Committee
Recommend not to proceed
Recommend charges laid (within 2 years of incident)
Recommend Letter of Warning
Prosecutor makes final decision based on likelihood of conviction
Charges laid
Letter of Warning issued

Figure 5. Emergency oil spill environmental response protocol and Oceans role with respect to possible spills in an MPA.

5.0 MONITORING AND MANAGEMENT PLAN FOLLOW-UP

As discussed in Section 3.0 and Tables 1 and 2, the effectiveness of the management actions in achieving the MPA conservation objectives are assessed through the scientific monitoring program. The monitoring program has shown a steep decline in Gilbert Bay cod, particularly the large (commercial size) cod. Tag tracking indicates that large Gilbert Bay cod move outside the MPA into Alexis Bay and Gilbert Bay during the summer to feed, and return to the MPA to spawn and over-winter. The catch rate and biomass of Gilbert Bay cod inside the MPA corresponds closely to fishing effort outside the MPA. Conservation measures based on cod migration patterns will continue to be validated by the Science monitoring program.

To address the declining cod population, changes to the updated Management Plan include a later season opening date for cod outside the MPA, an expanded science monitoring program with new genetic work, and tagging studies outside the MPA. Other changes reflected in the Management Plan include the evolution from a steering committee to an advisory committee, holding an annual general meeting instead of several Committee meetings per year, and the discontinuation of an MPA community coordinator position.

The 2013-2018 Gilbert Bay Management Plan will be reviewed in 2018. However, DFO may adapt management actions on a continuous basis should amendments be necessary. The advice of the Gilbert Bay Advisory Committee and results of the scientific and enforcement monitoring programs will be taken into consideration and an adaptive management approach adopted with respect to any necessary changes. This plan is a living document and the principle of adaptive management will be applied where required.

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Appendix A

Application for Approval for Scientific or Educational Activities within Newfoundland and Labrador Marine Protected Areas

Activity Plan

Application for Approval for Scientific or Educational Activities within Newfoundland and Labrador Marine Protected Areas

Date Submitted _____

Box 1: Identification of Marine Protected Area

Box 2: Contact Information		
Principal Contact (Name and Job Title)	*Address*	*Telephone, Facsimile and Email*
Chief Scientists (Name and Job Title)	*Address*	*Telephone, Facsimile and Email*
Research Vessel (Name and number of crew	*Captain or pilot's name*	*Telephone, Facsimile and Email*
Name of organization proposing the activity	*Funding Agency*	

Box 3: Purpose of Activity

Box 4: Description of Activity
E.g. types of data to be collected, sampling protocols or other techniques to be used to collect data, types of equipment to be used, methods for mooring or anchoring of equipment (if applicable), type and identity of vessels to be used, and every substance, if any, that is to be deposited, discharged or dumped with the area

Box 5: Activity Justification

Box 6: Period and Duration within the MPA

Box 7: Location of Activities within the MPA (attach map)

Box 8: List of Licenses, Permits, Authorization or Consents

Box 9: Assessment of Environmental Impacts
Activities under Assessment **Pathways for Interactions** **Scope of Potential Impacts on Environment** **Potential for Impacts of Environment on Activity** **Cumulative Effects**

Box 10: Mitigation, Monitoring and Evaluation

Box 11: Conclusions

Box 12: References

Box 13: Appendix

Draft Guidelines for Preparing and Submitting Activity Plan Applications for Scientific or Educational Activities in Newfoundland and Labrador Marine Protected Areas

1. Introduction

With the designation of a Marine Protected Area (MPA) under the *Ocean Act*, there are associated regulations. These regulations generally outline the geographic area of the MPA, the associated management zones (if any), prohibited activities and exceptions with provisions for the approval of scientific and educational activities within the MPA.

It is recognized that scientific or educational activities have the potential to disturb, damage or destroy or remove living organisms or its habitat from a MPA. Therefore any person that proposes to carry out a scientific or educational activity in a MPA must submit an Activity Plan outlining specific information requirements. Activity Plans must be submitted to the Department of Fisheries and Oceans (DFO) 60 days prior to the day the proposed activity is to commence. The DFO must approve the plan if the proposed activity is not likely to damage or destroy the habitat of a living marine organism in the MPA within 30 days of receiving the Plan.

These guidelines describe the information requirements of the Activity Plan application and approval process.

2. Application Content

Box 1: Identification of the MPA

The name of the MPA in which scientific or educational activity is being proposed is provided.

Box 2: Contact Information

Provide the name, job title and contact information for the principal contact and chief scientist(s). The curriculum vitae of any research scientists or personnel performing the activity should be provided in an appendix. The identification of the vessel(s) (ships or aircrafts), the name and contact information of the captain(s) or pilot(s), and the number of crew/berths per vessel should also be provided. The name of the organization proposing the activity and the funding agency must also be identified. The funding proposal can be provide as an appendix.

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Box 3: Purpose of Activity

Provide a brief description of the objective of the activity, the methods to be used and why this activity should occur within the MPA boundaries.

Box 4: Description of Activity

For the description of the activity, provide a detailed explanation of the objectives and hypotheses to be tested. Also provide a description of the types of data to be collected, sampling protocols and methodologies and equipment to be used. If equipment is to be deployed, the method of mooring or anchoring of equipment (if applicable), the duration and position (latitude and longitude and position in the water column) within the MPA should be specified. Diagrams and pictures of the equipment should be provided.

The types and identity of the vessels to carry out the work must be provided.

The types of animals/organisms and habitats to be studied must be identified. If specimens are to be collected, the number of specimens, the location and sampling protocols and equipment must be described. The purpose of this collection must be explained and associated/following experimentation described.

If any substance is to be deposited, discharged or dumped within the area it must be described in detail.

Box 5: Activity Justification

Describe why and how this activity could be beneficial to the management or monitoring of the conservation of the MPA. Provide the rationale for the activity being conducted in the MPA. If the project has been done in the past, describe how the information collected benefited science and the management of the MPA. If appropriate, also explain how the proposed activity may facilitate other investigations within the MPA.

Box 6: Period and Duration within the MPA

Provide the exact dates the vessel(s) will be in the MPA and the duration of the activity to be conducted.

Box 7: Location of Activity within the MPA (attach map)

Provide the exact latitude and longitude and zone (if applicable) where the activity will be occurring. Provide a map showing the location of the proposed activity.

Describe in general terms the biophysical oceanographic condition of the proposed location, including but not limited to; water depth, substrate type(s), predominant currents, tidal patterns, predominant wind direction/fetch, etc. If known, the likely macro flora and fauna assemblages should be described.

State the name and number of port of calls that the vessel(s) will be using.

Box 8: List of licences, permits, authorizations or consents

Provide a list of the licences, permits, authorizations or consents that were obtained to conduct or apply to the activity that this application is requesting approval for. If there were any other research or monitoring activities done under these licences, permits, authorizations or consents please provide details.

Box 9: Assessment of Environmental Impacts

Activities under Assessment

List the activities to be assessed for potential environmental impacts.

Pathways for Interactions

List the potential pathways in which damage or destruction of the environment (habitat or the organisms) could occur during, or as a result of, the activity in the MPA.

Scope of Potential Impacts on Environment

Assess and discuss the environmental consequences to performing this activity in the MPA. State if the activity could be done outside the boundaries of the MPA and still meet the objectives. Provide the potential impacts this activity may have on all aspects of the environment (species, habitat, etc.). If there is removal of species, describe the potential impacts of the removal on the population as well as other species and their population. Species under the Species at Risk Act (SARA) must be addressed. Determine the potential impact* the activity will have on all aspects of the marine environment.

Potential for Impacts of Environment on Activity

State if the type of environment (oceanographic or geographic) could have on the activity and the gear used. Determine the potential impact* the environment may have on the activity.

Cumulative Effects

State if there are any cumulative effects either with past or current activities happening within the MPA. Determine the potential impact* on the MPA.

Box 10: Mitigation, Monitoring and Evaluation

State the proposed mitigation measures that will be used to address the impacts describe above.

State the kinds of monitoring and evaluation that will be used to determine if the mitigation efforts are minimizing the impacts and to ensure that there are no unexpected impacts.

Box 11: Conclusions

Summarize the overall impacts of the proposed activity and determine the potential impact* on the MPA.

Box 12: References

State any references that were used in the activity plan application.

* The potential impacts are to be described as negligible, low, medium, high, or unacceptable. These descriptors are to be defined in terms of the duration, spatial scale, magnitude, sensitivity of species, and magnitude (individual, community or population levels).

Box 13: Appendix

Append location map and any supplementary material

3. Other Considerations

Zones

Exceptions to the general prohibitions outlined in the MPA regulations must be considered in the above. Specifically,

any zonation of the MPA must be considered and described in the information provided and assessment of environmental effects.

Cumulative Impacts

No activities will be approved for the MPA if the cumulative impacts to the area resulting from past and current activities cause disturbance, damage, destruction, or removal.

Submission of Application

Two copies of the application (Activity Plan) must be submitted 60 days before the activity to the Fisheries and Oceans Canada, Oceans Division.

Approval Process

A response will be sent to the applicant within 30 days of receiving the application. It will be evaluated according to the criteria set forth in the MPA regulations. The applicant will be contacted if there is incomplete information or if the reviewer needs clarification on the activity or application. The application will be reviewed by Oceans Division and they may seek expert advice on certain aspects of the application.

Reporting Requirements

Under the *Oceans Act* section 35(3)(b)(iii), the proponent is to provide a report describing the research. The report should summarize the purpose of the research, the method used as well as the results collect. It should content the chief scientist(s) name, the dates when the work was performed, the location (latitude and longitude), name and number of specimens collect, location of any deployed material and the result for the monitoring evaluation of mitigation measures. Also state, if any, the unexpected impacts to the MPA. The report is to be submitted to the Oceans Division with 2 months of the completion of the research.

Contact Information

For further information on the Guidelines for submitting applications for research and monitoring approval in the MPA or the MPA regulation, write to Fisheries and Oceans Canada, Oceans Division:

Head, Oceans Programs Section
Oceans Division, Oceans and Habitat Management Branch
P.O. Box 5667
St. John's, NL A1C 5X1
MPANL@dfo-mpo.gc.ca

Appendix B

Gilbert Bay Marine Protected Area Regulations

GILBERT BAY MARINE PROTECTED AREA REGULATIONS

INTERPRETATION

1. (1) The following definitions apply in these Regulations.

"Area" means the Gilbert Bay Marine Protected Area designated under section 2. (*zone*)

"vessel" has the same meaning as in section 2 the *Canada Shipping Act*. (*bâtiment*)

"waters" means, in addition to the waters, the bed and subsoil below the waters to a depth of two metres. (*eaux*)

(2) In these Regulations, all geographical coordinates (latitude and longitude) are expressed in the North America Datum 1983 (NAD 83) geodetic reference system.

(3) In the schedule, the lines connecting the points are rhumb lines.

DESIGNATION

2. The areas of the sea in Gilbert Bay comprised of the management zones described below — and depicted in the schedule — are together designated as the Gilbert Bay Marine Protected Area:

(*a*) Zone 1A, consisting of waters lying generally northwest of a rhumb line connecting points at 52°38'56" N, 55°59'28" W and 52°37'43" N, 55°59'36" W, that are within an area of the sea bounded by the low-water line of the bay and by the rhumb line to its points of intersection with the low-water line;

(*b*) Zone 1B, consisting of waters lying generally southwest of a rhumb line connecting points at 52°37'00" N, 55°58'07" W and 52°36'49" N, 55°57'45" W, that are within an area of the sea bounded by the low-water line of the bay and by the rhumb line to its points of intersection with the low-water line;

(*c*) Zone 2, consisting of waters that are within an area of the sea bounded by the low-water line of the bay and by the following rhumb lines to their respective points of intersection with the low-water line, namely,

(i) a line connecting points at 52°38'56" N, 55°59'28" W and 52°37'43" N, 55°59'36" W,

(ii) a line connecting points at 52°37'00" N, 55°58'07" W and 52°36'49" N, 55°57'45" W, and

(iii) a line connecting points at 52°36'16" N, 55°52'19" W and 52°35'38" N, 55°52'20" W; and

(*d*) Zone 3, consisting of waters that are within an area of the sea bounded by the low-water line of the bay and by the following rhumb lines to their respective points of intersection with the low-water line:

(i) a line connecting points at 52°36'16" N, 55°52'19" W and 52°35'38" N, 55°52'20" W,

(ii) a line connecting points at 52°36'01" N, 55°51'08" W and 52°35'44" N, 55°50'42" W,

(iii) a line connecting points at 52°33'17" N, 55°46'27" W and 52°32'59" N, 55°46'58" W, and

(iv) a line connecting points at 52°33'25" N, 55°54'19" W and 52°33'01" N, 55°33'31" W.

PROHIBITED ACTIVITIES

3. (1) In the Area, no person shall

(*a*) disturb, damage or destroy, or remove from the Area, any living marine organism or any part of its habitat; or

(*b*) carry out any activity — including depositing, discharging or dumping any substance, or causing any substance to be deposited, discharged or dumped — that is likely to result in the disturbance, damage, destruction or removal of a living marine organism or any part of its habitat.

(2) Despite subsection (1), a person may carry out any activity excepted under section 4 or any scientific or educational activity for which a plan is approved under section 6.

EXCEPTIONS

4. The following activities may be carried out in the Area:

(*a*) the following fishing activities, namely,

(i) fishing that is carried out in accordance with the *Aboriginal Communal Fishing Licences Regulations*,

(ii) fishing for seals under the *Marine Mammal Regulations* and any related activity to which those Regulations apply when the fishing or the related activity is carried out in accordance with those Regulations,

(iii) any of the following recreational fishing activities carried out in accordance with the *Atlantic Fishery Regulations, 1985* or the *Newfoundland and Labrador Fishery Regulations*, namely,

(A) in Zone 1A or 1B, angling for Arctic char, salmon or trout,

(B) in Zone 2, fishing for any species other than Atlantic cod, and

(C) in Zone 3, fishing for any species, and

(iv) commercial fishing in Zone 2 or 3, for any species other than Atlantic cod, that is carried out in accordance with the *Atlantic Fishery Regulations, 1985* or the *Newfoundland and Labrador Fishery Regulations*;

(*b*) any of the following activities — in relation to which approval or authorization is not required under the *Navigable Waters Protection Act* or the *Fisheries Act*, as the case may be, or that is carried out in accordance with a related approval or authorization required under either of those Acts — namely,

(i) in Zone 1A or 1B, the maintenance, repair or removal of a wharf,

(ii) in Zone 2, the construction, maintenance, repair or removal of a wharf, and

(iii) in Zone 3, the construction, maintenance, repair or removal of a wharf, causeway or bridge; and

(*c*) any activity that is carried out for the purpose of public safety, national security or law enforcement or in response to an emergency.

ACTIVITY PLAN

5. Every person who proposes to carry out a scientific or an educational activity in the Area shall submit to the Minister for approval, not less than 60 days before the day on which the activity is proposed to begin, a plan that contains the following information and documents:

(*a*) the name, address and telephone number, and if applicable, the facsimile number and electronic mail address, of a person who can be contacted in respect of the plan;

(*b*) a detailed description of the proposed activity that sets out

(i) the purpose of the proposed activity,

(ii) the period or periods during which the proposed activity is to be carried out,

(iii) a map on which the location of the proposed activity is identified,

(iv) the types of data that are to be collected, if any, and the sampling protocols or other techniques to be used to collect the data,

(v) the types of equipment, if any, that are to be used during the proposed activity, including those for gathering data, and, if any of the equipment is to be anchored or moored in the Area, the methods by which the anchoring or mooring is to be conducted,

(vi) the type and identity of every vessel that is to be used to carry out the proposed activity, and

(vii)every substance, if any, that is to be deposited, discharged or dumped within the Area during the proposed activity;

(*c*) an assessment of the environmental effects that are likely to occur within the Area as a result of the proposed activity; and

(*d*) a list of every licence, permit, authorization or consent obtained or applied for in respect of the proposed activity.

6. (1) Subject to subsection (2), the Minister shall, within 30 days after the day on which a plan that is submitted in accordance with section 5 is received, approve the plan if the proposed activity is not likely to damage or destroy the habitat of a living marine organism in the Area and

(*a*) in the case of a scientific activity that is proposed to be carried out in Zone 1A or 1B, the activity is for the purpose of monitoring the effectiveness of conservation measures implemented in, or for the management of, the Area; and

(*b*) in the case of an educational activity that is proposed to be carried out in Zone 1A or 1B, the activity is for the purpose of increasing public awareness of the Area or providing information in respect of the conservation measures implemented in the Area.

(2) The Minister shall not approve a plan if the cumulative environmental effects of the proposed activity, in combination with any other past and current activities carried out within the Area, are likely to damage or destroy the habitat of living marine organisms in that area.

REPORTING OF ACCIDENTS

7. Every person involved in an accident that is likely to result in any disturbance, damage, destruction or removal prohibited under subsection 3(1) shall, within two hours after its occurrence, report the accident to the Canadian Coast Guard.

COMING INTO FORCE

8. These Regulations come into force on the day on which they are registered.

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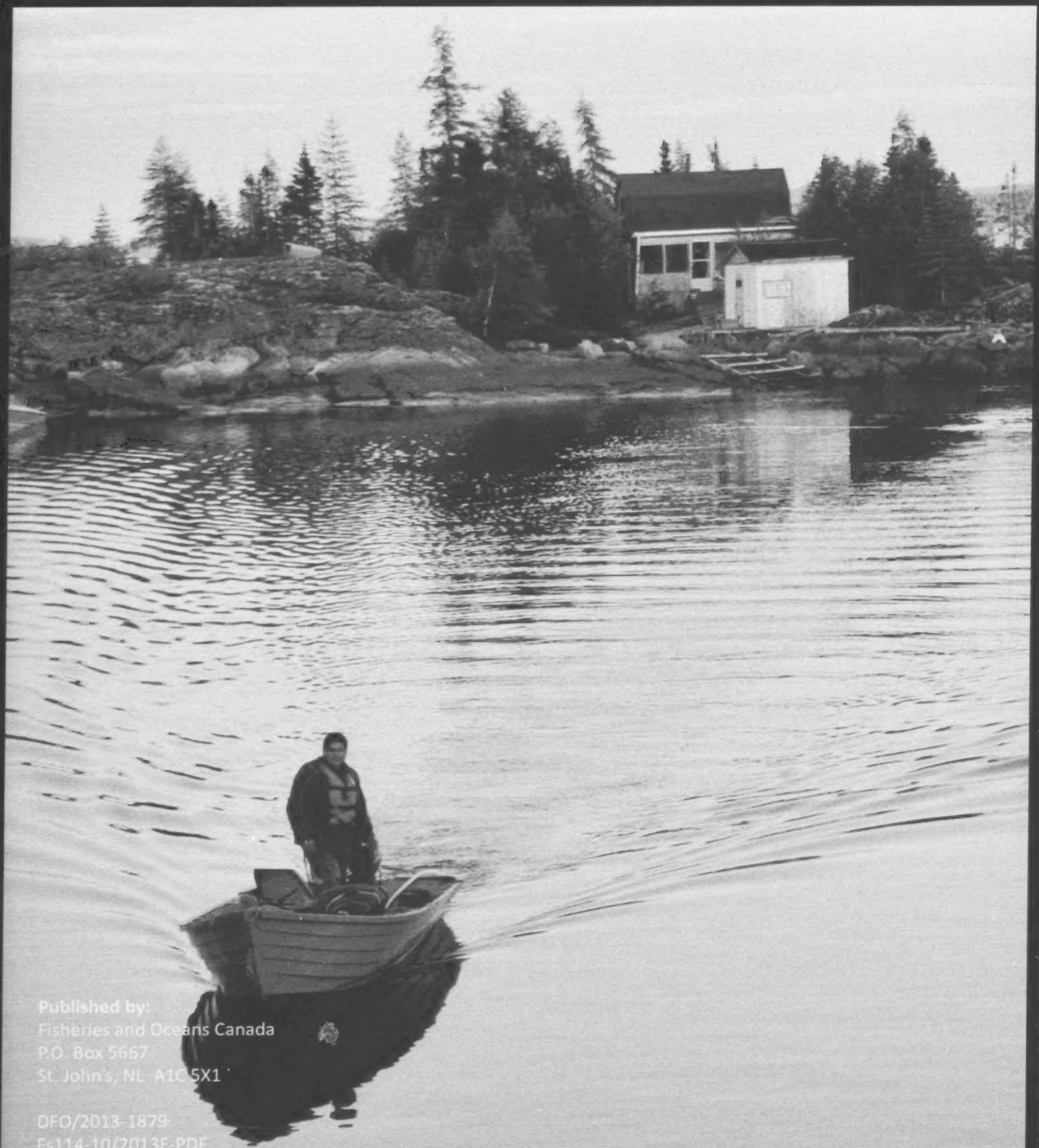

Published by:
Fisheries and Oceans Canada
P.O. Box 5667
St. John's, NL A1C 5X1

DFO/2013-1879
Fs114-10/2013E-PDF
978-1-100-22047-5

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